Bloodborne Pathogens

The OSHA 10-Hour General Industry Course

Required Online Topic Time: 30m

Learning Objectives

Duration

30 minutes

Terminal Learning Objective

Given current OSHA and industry information regarding general industry worksite illnesses, injuries, and/or fatalities, the student will be able to recognize hazards associated when working with bloodborne pathogens in the workplace.

Enabling Learning Objectives

- Identify OSHA requirements pertaining to bloodborne pathogens.
- List the potential routes of exposure from bloodborne pathogens.
- Identify the risks associated with Human Immunodeficiency Virus (HIV), Hepatitis B Virus, and Hepatitis C Virus.
- Identify methods of preventing transmission of bloodborne pathogens and managing occupational exposures.
- Restate methods of the safe disposal of sharps.
- Recount steps which should be taken in the event of an exposure to a potential bloodborne pathogen.

Introduction

Bloodborne pathogens are infectious microorganisms carried by blood that can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus (HIV).

Needlesticks and other sharps-related injuries may expose workers to bloodborne pathogens.

Employer Responsibilities

OSHA's Bloodborne Pathogens Standard, as amended by the 2000 Needlestick Safety and Prevention Act, is a regulation that prescribes safeguards to protect workers against health hazards related to bloodborne pathogens.

The Needlestick Safety and Prevention Act, signed in 2000 revised the bloodborne pathogens standard to include specific additional definitions and requirements. Due to the act, employers are required to:

- *Evaluate*
- *Select*
- *Use engineering controls*

Employer Responsibilities

continued...

An **exposure control plan** is a written plan to eliminate or minimize occupational exposures. The employer must write a plan that lists the jobs where workers may be exposed, along with a list of the tasks and procedures performed by those workers that result in their exposure.

Employers must use input from frontline workers to **update the exposure control plan annually**. These updates must reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure.

Employers are required to implement the use of **universal precautions** (treating all human blood and other potentially infectious material as if known to be infectious for bloodborne pathogens).

Engineering controls are devices that isolate or remove the bloodborne pathogens hazard from the workplace and the standard requires that employers identify and use such engineering controls. They include sharps disposal containers, self-sheathing needles, and so on.

Employers are required to identify and ensure the use of **work practice controls**. These are practices that reduce the possibility of exposure by changing the way a task is performed, such as appropriate practices for handling and disposing of contaminated sharps.

Employers must provide **personal protective equipment (PPE)**, such as gloves, gowns, eye protection, and masks. Employers must clean, repair, and replace this equipment as needed. Provision, maintenance, repair and replacement are at no cost to the worker.

Employer Responsibilities

continued...

Your employer must provide **Hepatitis B vaccinations** to all workers with occupational exposure.

Employers must make available **post-exposure evaluation and follow-up** to any occupationally exposed worker who experiences an exposure incident.

Employers must ensure that their workers receive **regular training** that covers all elements of the standard. Employers must offer this training at the time of hiring, at least annually thereafter, and when new or modified tasks or procedures affect a worker's occupational exposure.

Warning labels must be affixed to containers of regulated waste; containers of contaminated reusable sharps; refrigerators and freezers containing blood or other potentially infectious material; other containers used to store, transport, or ship blood or other potentially infectious material; contaminated equipment that is being shipped or serviced; and bags or containers of contaminated laundry, except as provided in the standard.

In HIV and Hepatitis B research laboratories and production facilities, **signs** must be posted at all access doors when other potentially infectious material or infected animals are present in the work area or containment module.

Employers also have an obligation to maintain worker **medical and training records**. The employer also must maintain a **sharps injury log**.

Employer Responsibilities

continued...

Knowledge Key

You, as a worker, have legal protections against health hazards related to bloodborne pathogens. Among other things, these protections require that employers provide PPE, use controls to prevent injury, label hazards correctly, and provide Hepatitis B vaccinations, as well as free medical evaluations should an injury involving bloodborne pathogens occur.

Common Bloodborne Disease Risks

The most common bloodborne pathogens are HIV, Hepatitis B, and Hepatitis C.

Exposures to these diseases can occur via (1) a skin injury or (2) contact with mucous membranes or non-intact skin with blood, tissue, or other bodily fluids.

Common Bloodborne Disease Risks continued...

Knowledge Key

The most common bloodborne pathogens are HIV, Hepatitis B, and Hepatitis C. Exposures to these diseases can occur via (1) a skin injury or (2) contact with mucous membranes or non-intact skin with blood, tissue, or other bodily fluids.

Reducing Exposure Risks

Bloodborne pathogens are transmitted in human blood and other potentially infectious materials such as semen, vaginal secretions, and saliva in dental procedures. These bloodborne pathogens have not been shown to be transmitted by sweat, tears, urine, or feces. But remember, **these substances can also be mixed with blood**.

Reducing Exposure Risks

continued...

The most common risk of exposure is by needle stick injury. Exposure can also happen when blood and other infectious materials touch the eyes, nose, or mouth.

You can protect yourself from exposure to bloodborne pathogens by:

- Treating all body fluid as infectious
- Wearing PPE
- Disposing of PPE correctly
- Keeping your hands clean
- Avoiding eating, drinking, applying cosmetics or contact lenses around potential bloodborne pathogens

Sharps, such as needles, must be disposed of in a **designated sharps container**. Sharps containers must be emptied by professional biohazard removal services. **Never empty a sharps container yourself.**

Reducing Exposure Risks

continued...

Containers for contaminated sharps must be **puncture-resistant**. The sides and the bottom must also be **leak-proof**. They must be **appropriately labeled or color-coded red** to warn everyone that the contents are hazardous. Containers for disposable sharps must be **closable** (that is, have a lid, flap, door, or other means of closing the container), and they must be **kept upright** to keep the sharps and any liquids from spilling out of the container.

The containers must be **replaced routinely** and **not be overfilled**, which can increase the risk of needlesticks or cuts. Sharps disposal containers that are reusable **must not be opened, emptied, or cleaned manually or in any other manner that would expose workers to the risk of sharps injury**.

Reducing Exposure Risks

continued...

Knowledge Key

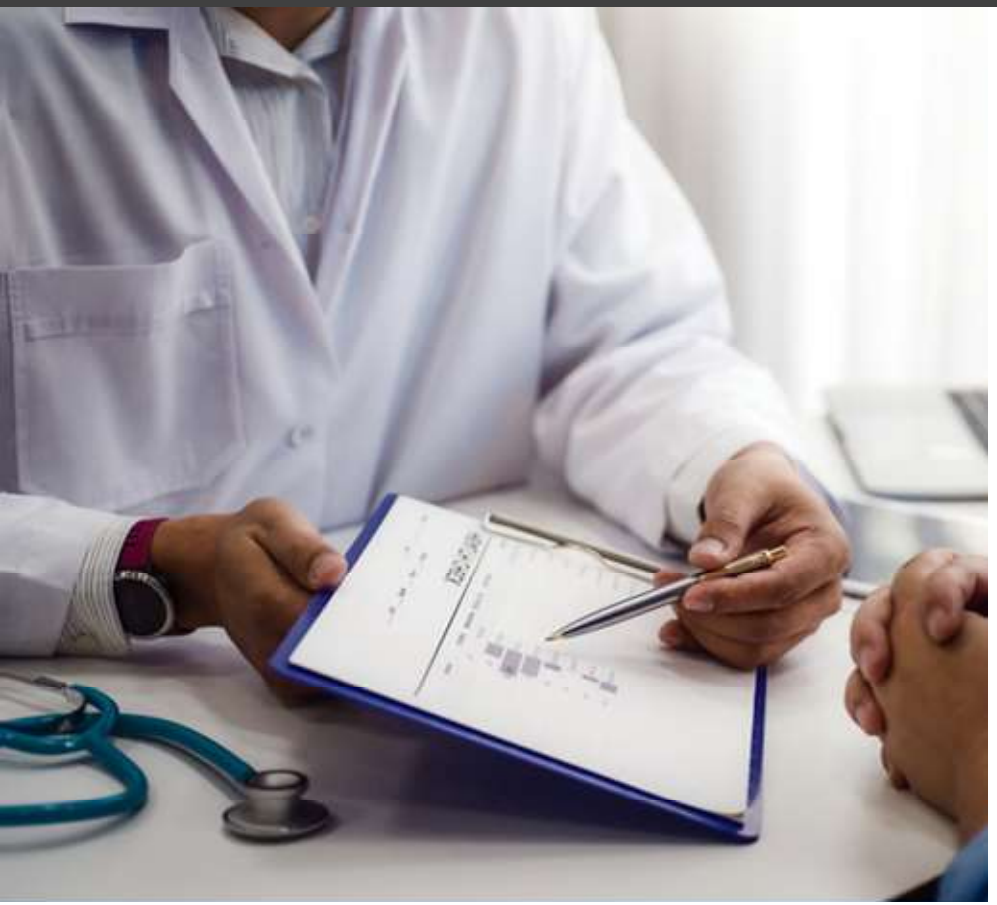
You can protect yourself from exposure to bloodborne pathogens by treating all body fluid as infectious, wearing PPE, disposing of PPE correctly, keeping your hands clean, and avoiding eating, drinking, applying cosmetics or contact lenses around potential bloodborne pathogens. Sharps, such as needles, must be disposed of in a designated sharps container. Sharps containers must be emptied by professional biohazard removal services. Never empty a sharps container yourself.

In Case of Exposure

If you are exposed to infectious materials via an exposure incident, such as a needlestick or sharps injury or are exposed to the blood or other bodily fluid of a patient during the course of your work, immediately follow these steps:

1. *Wash needlesticks and cuts with soap and water*
2. *Flush splashes to the nose, mouth, or skin with water*
3. *Irrigate eyes with clean water, saline, or sterile irrigants*
4. *Report the incident to your supervisor*
5. *Immediately seek medical treatment*

In Case of Exposure continued...

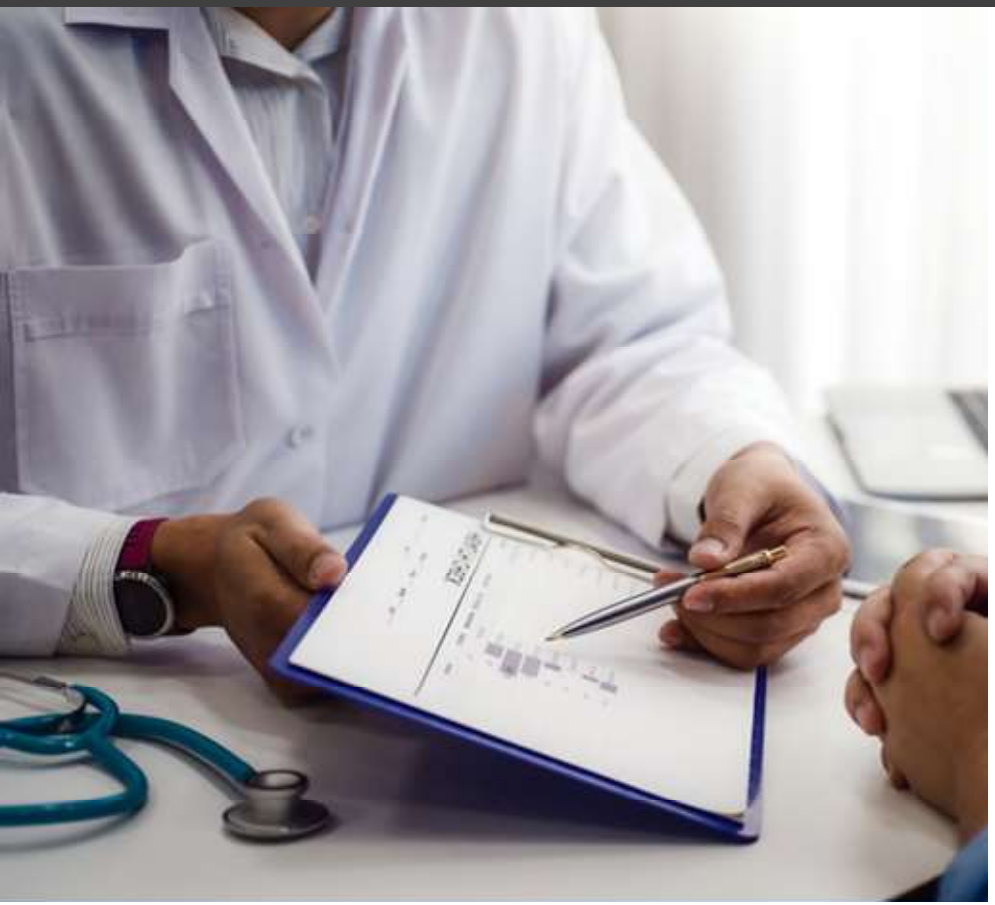


Post-exposure medication for HIV, Hepatitis B, and Hepatitis C, when medically indicated, must be offered to you after an exposure according to the current recommendations of the U.S. Public Health Service.

The post-exposure follow-up must include **counseling** about the possible implications of the exposure and your infection status, including the **results and interpretation of all tests** and **how to protect personal contacts**. The follow-up must also include **evaluation of reported illnesses** that may be related to the exposure.

Your employer must also provide you with a copy of the evaluating healthcare professional's written opinion **within 15 days** of completion of the evaluation.

In Case of Exposure continued...



This evaluation and follow-up must be:

- *Made available to you at no cost and at a reasonable time and place*
- *Performed by or under the supervision of a licensed physician or other licensed healthcare professional*
- *Provided according to the recommendations of the U.S. Public Health Service current at the time the procedures take place*

In addition, laboratory tests must be conducted by an accredited laboratory and also must be at **no cost to you**.

In Case of Exposure continued...

Knowledge Key

If you are exposed to infectious material via a needlestick or sharps injury or are exposed to blood or other bodily fluids, immediately wash the area with soap and water, flush splashes to the nose, mouth or skin with water, or irrigate the eyes with water, saline or sterile irrigants. Then report the incident to your employer who is required to offer you a cost-free medical evaluation and appropriate testing.

Practice Questions

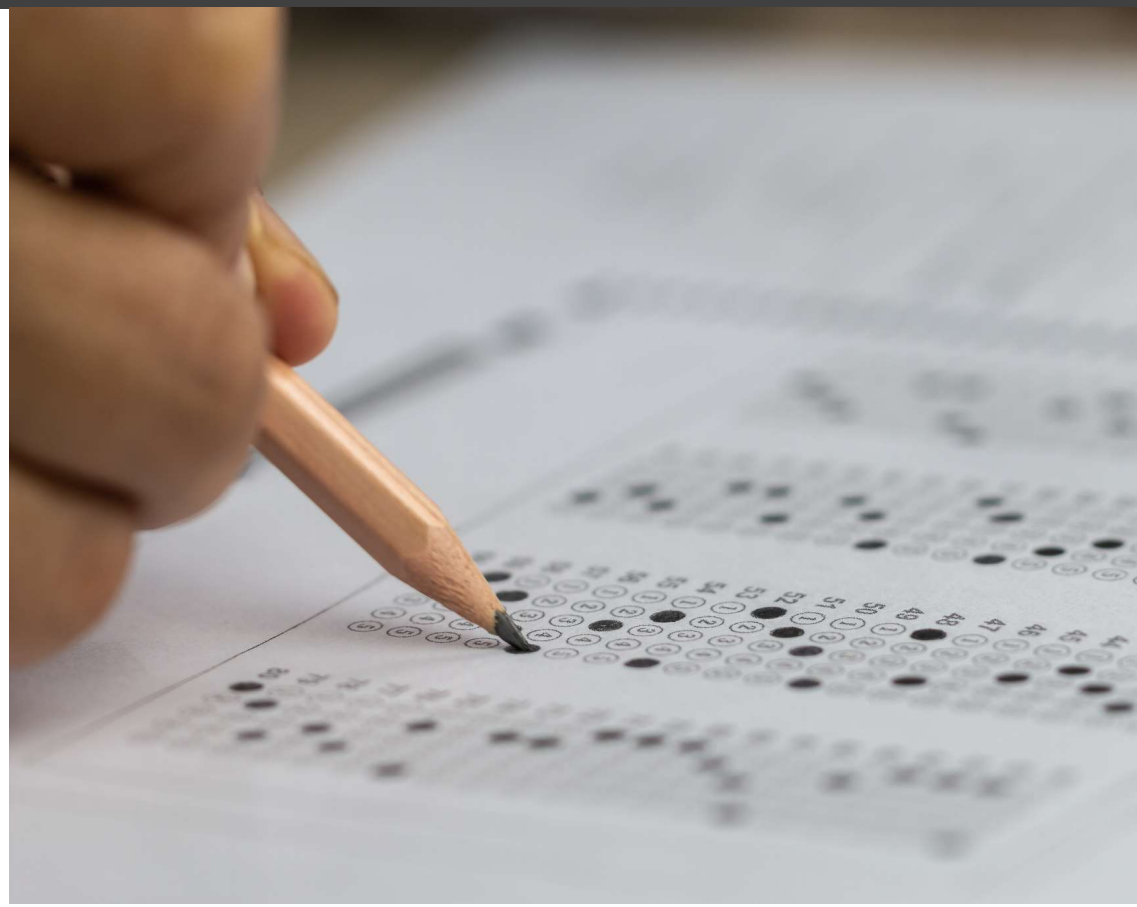
1. Employers are required to implement the use of what when working with all human blood and other potentially infectious material regardless of whether it is known to be infectious for bloodborne pathogens?
    a. Engineering Controls
    b. Work Practice Controls
    c. Universal Precautions

2. Chris has cut himself at work. What should he immediately do?
    a. Wash the area with soap and water
    b. Put his finger in his mouth
    c. Put on a band aid and keep working
    d. Use paper towels to clean up

3. Containers for contaminated sharps must have certain features. What are these? Select all that apply.
    a. Puncture-resistant
    b. Leakproof
    c. Open on one side
    d. Biohazards labeled or color-coded red
    e. Closable
    f. Kept upright
    g. Visible window

Practice Questions Answer Key

1. C
2. A
3. A, B, D, E, F



Conclusion

Great Job!

You have completed the Bloodborne Pathogens topic.